

REMARKS

Claims 10, 11 and 16-26 are pending in this application. By this Amendment, claims 1-9 and 12-15 are canceled, claim 10 and 11 are amended and claims 16-26 are added. Reconsideration in view of the above amendments and following remarks is respectfully requested.

Applicant appreciates the courtesies shown to Applicant's representative by Examiner Qi and Supervisory Examiner Kim during the May 20 personal interview. Applicant's separate record of the substance of the interview is incorporated into the following remarks.

The Office Action rejects claim 2 under 35 U.S.C. §112, second paragraph. Applicant cancels claim 2 without prejudice or disclaimer. Accordingly, the rejection is moot.

The Office Action rejects claims 1 and 14 under 35 U.S.C. §103(a) as being unpatentable over Kobayashi (U.S. Patent No. 5,767,827) in view of Shimada (U.S. Patent No. 5,805,252) and Shintani (U.S. Patent No. 5,978,056); claim 2 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi, Shimada and Shintani, and further in view of Kahn (U.S. Patent No. 5,056,895); claims 3, 8 and 9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Matsunaga (U.S. Patent No. 5,510,918) in view of Kahn; claim 4 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi in view of Matsunaga; claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi and Matsunaga, and further in view of Shimada; claim 6 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kobayashi and Matsunaga, and further in view of Kahn; claims 7 and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Matsunaga in view of Kahn; claims 10 and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Matsunaga in view of Kahn; and claims 12 and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Matsunaga in view of Kobayashi.

Claims 1-9 and 12-15 are canceled without prejudice or disclaimer. Thus, the rejection of these claims are moot. However, the rejections are traversed with regard to claims 10, 11 and 16-26.

In particular, Applicant asserts that neither Kobayashi, Shimada, Shintani, Matsunaga nor Kahn, either alone or in combination, disclose or suggest a substrate for a liquid crystal panel, including at least a periphery region arranged in a periphery of a pixel region, the periphery region having a laminate structure that includes a metal layer and an insulating layer formed above the substrate, a scribed region arranged on an outer side of the periphery region, a step formed between the periphery region and the scribed region, the laminate structure having a sidewall at the step, and a passivation film includes a silicon nitride film that covers the sidewall of the laminate structure, as recited in independent claim 10, and similarly recited in independent claims 17.

Furthermore, none of the applied references disclose or suggest a substrate for a liquid crystal panel, including at least a first passivation film having a silicon oxide film and a silicon nitride film formed on the silicon oxide film, and a second passivation film covering reflecting electrodes and having a silicon oxide film as a same layer as the silicon oxide film of the first passivation film, as recited in independent claims 20 and 23.

Moreover, none of the applied references disclose or suggest a substrate for a liquid crystal panel, including at least a passivation film formed by a silicon oxide film and an insulating interlayer formed by a silicon nitride film form a laminate structure at a space between adjacent reflecting electrodes, as recited in independent claim 26.

Specifically, the Office Action asserts that Kobayashi discloses that "a passivation film 11 formed on reflecting electrodes 9 is a silicon oxide film as a protective film for the pixel transistor on the pixel electrodes." See Office Action, page 3, paragraph 4.

Furthermore, the Office Action asserts that although Kobayashi does not expressly disclose that the insulating film is a silicon nitride film, Shimada discloses that "an insulating film is made of silicon nitride or silicon oxide, and a dielectric film as an insulating film made of silicon nitride or silicon oxide, was common and known in the art."

Shintani discloses that an active circuit element substrate includes a light shielding layer 51 covered with an anti-reflection film 52. See Fig. 13.

Kahn discloses an active matrix liquid crystal light valve that has an array of electrodes to create electric fields across the liquid crystal layer.

Matsunaga discloses that a gate terminal GTM is formed of an aluminum film and a transparent conductive film which is deposited on the aluminum film.

In contrast to the claimed invention, neither Kobayashi, Shimada, Shintani, Matsunaga nor Kahn, either alone or in combination, disclose or suggest a substrate for a liquid crystal panel, including at least a periphery region arranged in a periphery of a pixel region, the periphery region having a laminate structure that includes a metal layer and an insulating layer formed above the substrate, a scribed region arranged on an outer side of the periphery region, a step formed between the periphery region and the scribed region, the laminate structure having a sidewall at the step, and a passivation film includes a silicon nitride film that covers the sidewall of the laminate structure.

Furthermore, none of the applied references disclose or suggest a substrate for a liquid crystal panel, including at least a first passivation film having a silicon oxide film and a silicon nitride film formed on the silicon oxide film, and a second passivation film covering reflecting electrodes and having a silicon oxide film as a same layer as the silicon oxide film of the first passivation film.

Moreover, none of the applied references disclose or suggest a substrate for a liquid crystal panel, including at least a passivation film formed by a silicon oxide film and an

insulating interlayer formed by a silicon nitride film form a laminate structure at a space between adjacent reflecting electrodes.

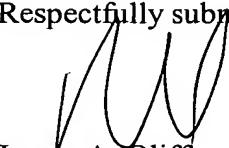
On the contrary, although Kobayashi discloses that a passivation film 11 is used on the substrate 1, nowhere in Kobayashi are these features disclosed or suggested. Furthermore, Shimada, Shintani, Kahn and Matsunaga all fail to compensate for deficiencies in Kobayashi. Thus, the passivation film cannot protect a metal layer of a laminate structure from moisture at a sidewall. Moreover, a periphery region cannot be protected from moisture by using a same layer as the passivation film formed in the pixel region. Finally, a space between adjacent reflecting electrodes cannot be protected from moisture by a laminate structure formed by a passivation layer film and an insulating layer.

Accordingly, any combination of the references would not have resulted in a device whereby reliability of the liquid crystal panel is improved along with image quality using the reflecting liquid crystal panel as a light valve in a projection display device. Thus, because it would not have been obvious to combine the applied references to arrive at the claimed invention, Applicant respectfully request that the rejections under 35 U.S.C. §103(a) be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 10, 11 and 16-26 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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